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10/802,304	03/17/2004	Clint Miller	TROU1100-1	3979

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EXAMINER	
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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/802,304	MILLER ET AL.	
	Examiner	Art Unit	
	Ted T. Vo	2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-53* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-53* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the communication filed on 10/18/2007.

Claims 46-53 are newly added. Claims 1-53 are presented and pending.

Response to Arguments

2. The claimed have been amended with newly added limitations. All Applicants' arguments to the rejection of claims based on these newly added limitations have been considered, but not persuasive. The amendment with newly added limitations fails to present patentability of the claims as required by 1.111(c). The newly added limitations instead include many well known things in the arts.

It should be noted that the Claims as a whole direct to a model per se without providing any particular application for it. The model has been discussed commonly in the art. The arguments amount generic allegations without pointing out the patentability of claims. Accordingly, the citation's mappings addressed in the claimed limitations clearly address the generic functionality of the claims.

Specification

3. All the blanks in the specification must be filled when the information is available.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 16-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 16-45 are indefinite. There is insufficient antecedent basis in the specification for **"computer readable medium"**. It is not known what type of media. Media may include non-statutory media such as air, transmission of signal, etc. The specification does not describe Medium. It requires pointing out where is the medium described in the specification.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. The claims 1-53 are rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter.

<u>As per Claims 1-53</u>:

Claims 1-53 represent modeling an environment. Even the claims recited as a method, a system including a computer and a product, and a product, the claims as a whole present a mere model comprising two components with relations between them. This type of the claims fails to provide any specific application, but rather to describe an object structure. It is a mere abstract idea.

Claims 16-30 direct to a mere act for storing and saving that present no practical application. It should be noted that using the word "save" in the claims without causing any effect provides no practical application. The product in the claims might be the code that stored in air or signal transmission media. Because these types of media are also readable by a computer, the claims are non-statutory.

Claims 31-45 is software per se. Even added with "computer readable medium", the software is separated from the medium because of with being "capable" to do in this medium. As noted that the specification fails to describe medium, the computer readable medium in the claim is non-statutory. The claims as a whole are a list of instructions that are merely a list per se with out functionality toward a practical subject matter. For example:

"an instruction to represent at least two entities in the environment wherein each entity is represented with a component and the component is saved": non functional descriptive material and no practical application.

"*an instruction to represent an association between the at least two components with a relationship*": non functional descriptive material and no practical application.

"*an instruction to define a hierarchy of the components and relationships*": non functional descriptive material and no practical application.

"*an instruction to query according to specific search criteria*": non functional descriptive material and no practical application.

The claims are clearly a list per se.

Claims 1-53 are describing a model rather than present a practical application. The claims fail to be statutory claims. The claims includes non-statutory medium such as are or signal transmission medium.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> > (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Robert Muller, "Database Design for Smarties Using UML for Data Modeling", Morgan Kaufmann Publishers, 1999.

Given the broadest reasonable interpretation of followed claims in light of the specification.

As per Claim 1: Muller discloses,

A method of modeling an environment (e.g. A Relational Database Schema using a UML model for person subsystem and UML model for Organization subsystem as seen in p. 166, chapter 11 – example: Figure 11-3, p. 169), ***comprising:***

representing at least two entities (e.g. an entity "person" and entity "Organization" such as seen in p. 168 – See Figure 11-3, p. 169) ***in the environment*** (i.e. Figure 11-2, p. 168), ***wherein each entity is represented with a component*** (entity "person' and entity "Organization" (e.g. Figure 11-3));

representing an association between the at least two components with a relationship (for example, within Figure 11-2, Role of a person in an Organization);

defining a hierarchy of the components and relationships (See p. 56. See p. 53 and Figure 4-1 but not limited to: refer to "Defining the hierarchy of actors); ***and***

querying according to specific search criteria (See p. 14, paragraph starts with "for example..."; see p. 27: using SQL language. See Figure 7-4, GetAddress() is a query interface to class Address.

Furthermore, other generic interface such as database interface, programming interface (p. 23), OO Design Interface (Figure 2-10, p.31), user interface (p.55), model interface (p.82), or a model itself is an interface (Figure 7-4, p. 91). See p. 54, all bold dots: Describing search criteria.

As per Claim 2: Muller discloses,

The method of claim 1, wherein each component is instantiated based on a component type (Each entity in Muller is UML class, In Figure 11-2, "person" is a component type in class of persons, "Criminal organization" is a component type in class of Organizations).

As per Claim 3: Muller discloses,

The method of claim 2, wherein each component type is in a hierarchy of component types (See Figure 11-2).

As per Claim 4: Muller discloses,

The method of claim 3, wherein each component type is a parent type or a subtype ("Organization" is a parent type in case the person is classified in Criminal organization type, also see p. 30, "inheritance").

As per Claim 5: Muller discloses,

The method of claim 4, wherein the hierarchy of component types is tailored to the environment (See all context in the book, e.g., hierarchical of persons in an organization, that is presented by OO/UML).

As per Claim 6: Muller discloses,

The method of claim 2, wherein each relationship is instantiated based on a relationship type (properties of OO and UML such as in p. 32-38).

As per Claim 7: Muller discloses,

The method of claim 6, wherein each relationship type is in a hierarchy of relationship types (properties of OO and UML).

As per Claim 8: Muller discloses,

The method of claim 7, wherein each relationship type is a parent type or a subtype (properties of OO and UML, also see p. 30, "inheritance").

As per Claim 9: Muller discloses,

The method of claim 8, wherein the hierarchy of relationship types is tailored to the environment (properties of OO and UML).

As per Claim 10: Muller discloses,

The method of claim 6, wherein each component is represented in a component table (properties of OO and UML, for example, within p. 37, "TABLE Person (....), and as noted that Relational database presents tables).

As per Claim 11: Muller discloses,

The method of claim 10, wherein each component type is represented in component type table (Refer to tables of relational database, and refer to the properties of OO and UML, for example, within p. 37, "TABLE TYPE ALIAS_TYPE (....)).).

As per Claim 12: Muller discloses,

The method of claim 11, wherein each relationship is represented in a relationship table (properties of OO and UML, and relational database).

As per Claim 13: Muller discloses,

The method of claim 12, wherein each relationship type is represented in relationship type table (properties of OO and UML, and relational database).

As per Claim 14: Muller discloses,

The method of claim 13, wherein the relationship table links each relationship to at least two components (Note the association shown is created by table links, using properties such as one-to-many).

As per Claim 15: Muller discloses,

The method of claim 14, wherein the relationship table and the relationship type are distinct (Muller discloses data structure of relational database that describes the relationship of tables, and Object

model that describes the relationship class or types (p. 12). The data structure that presents a relational database is of the tables/schemas. The tables/schemas and types of class are distinct).

As per Claim 46: Muller discloses,

The method of claim1, further comprising, utilizing a typing system to define the hierarchy of components and relationships (See all the teachings that refer to classes of UML: e.g. See p. 30).

As per Claim 47: Muller discloses, ***The method of claim 46, wherein the typing system further includes a generic model structure to define a hierarchy of components and relationships*** (See all the teachings that refer to classes hierarchy of OO using UML: e.g. See p. 30) .

As per Claim 48: Muller discloses, ***The method of claim 47, wherein a data structure is associated with the generic data model*** (refer to OO data model, or see p. 8).

As per Claim 49: Muller discloses,

The method of claim 48, wherein the data structure is associated with the generic data model is stored utilizing a table schema (refer to mapping within OO/schema, e.g. see p. 159)

As per Claim 50: Muller discloses, ***The method of claim 49, wherein the table schema does not change with an addition of a new data structure or types of data structures*** (Miller shows its adding OO does not changes the Database data structure. See p. 12).

As per Claim 51: Muller discloses,

The method of claim 1, wherein each of the relationships or components has a type, wherein the type is a category of the relationships or components and wherein the relationships or components type has the same properties (See the whole reference, particularly see p. 12)

As per Claim 52: Muller discloses, ***The method of claim 51, wherein the relationships or components has different values for the same properties associated with the type*** (Refer to attributes).

As per Claim 53: Muller discloses, ***The method of claim 52, wherein the relationship or component type further includes a subtype, wherein the subtype inherits all the properties of the relationship or component type*** (See p. 30, "inheritance").

As per Claims 16-30: Muller discloses the limitations of claims 16-30: see rationale addressed in Claims 2-15.

As per Claims 31-45: Muller discloses the limitations of claims 31-45: see rationale addressed in Claims 1-15.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (571) 272-3706. The examiner can normally be reached on 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708.

The facsimile number for the organization where this application or proceeding is assigned is the Central Facsimile number **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTV
January 04, 2008

TED VO
PRIMARY EXAMINER